

WEIGHTED TRAINING TAPE

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PRIORITY CLAIM

The present invention claims priority to U.S. Provisional Patent Application No. 60/443,085, filed January 28, 2003, entitled "WEIGHTED TRAINING TAPE," which is hereby incorporated by reference in its entirety.

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FIELD OF THE INVENTION

The present invention relates generally to the field of weight training devices for improving athletic skills. More specifically, the present invention relates to a weighted training tape capable of selectively imparting additional weight to an athletic device by fixedly wrapping the tape around at least a portion of the athletic device.

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BACKGROUND OF THE INVENTION

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The use of athletic training devices capable of imparting additional weight to either a participant or their athletic equipment during a training session are well known. Most typically, these devices are used during practice sessions as the athletes simulate the movements and activities they will employ during competition. By practicing with additional weight, an athlete develops strength, speed and endurance as their body works to overcome the additional weight. In addition, practicing with these devices creates an added sense of quickness and confidence in an athlete when the weight is removed during a game situation.

These training devices are available in a wide variety of configurations for a wide variety of activities. Examples include baseball doughnuts for use in an on-deck circle, weighted vests that slip over an athlete's torso, weighted pouches that include straps for fastening around one's arms or legs, or replicas of sports equipment that are designed to have the dimensions of official equipment but having an increased mass.

Due to its unique rules and playing environment, a number of unique training devices have been developed for the sport of hockey. More specifically, much effort has been focused on training devices for use in conjunction with a hockey stick. As the stick is essential for passing, shooting, puck handling and defensive purposes, weight training that promotes an athlete's use of their stick will lead to significant improvement in their overall game. One form of hockey stick training device includes weighted blade attachments as represented by U.S. Patents Nos. 5,484,146 to Loschiavo and 5,520,386 to Sasko. Other stick training devices include weighted shaft clamps such as U.S. Patents Nos. 4,364,560 to Gemmel and 6,328,666 to Manory. While such devices can perform adequately, developments in stick design have led to blades and shafts having a wide variety of sizes and shapes that may prevent these devices from being easily transferable between different sticks. In addition, these designs completely ignore another critical item of hockey equipment, the skates.

Another style of training device that has been suggested for use in conjunction with a hockey stick is a cylindrical, elongated weight as represented by U.S. Patent No. 5,993,325 to Heyer. While this design is flexible enough to be used with a variety of stick designs, the added bulk associated with a cylindrical cross-section causes the device to severely protrude from the

stick shaft leading to increased drag and making it bulky enough as to be ineffective for use during drills or scrimmages involving opposing players.

Another version of training device that has been suggested for use in conjunction with a hockey stick is an apparatus comprising a flexible body sheet having a plurality of weighted pockets, a friction pad and fastening means as disclosed by Canadian Patent 2,258,706 to Paul. While this provides a flexible design that can generally conform to a variety of stick designs, the added costs associated with constructing the individual weighted pockets as well as the conformance limitations necessarily introduced by having a finite number of pockets makes it less than an ideal solution.

In addition to the aforementioned disadvantages of the prior art, all of these designs fail to take into account additional uses, for example, use in conjunction with an athlete's skates.

What is needed is a training device that is flexible enough to be used with differing athletic designs from multiple manufacturers, can be reliably secured when in use, and is unobtrusive such that the training device does not interfere with the training regimen.

SUMMARY OF THE INVENTION

The training device of the present invention meets the requirements of versatility and unobtrusiveness. Through the use of a weighted tape design, a player can apply the weighted tape in a variety of locations during practice or training drills. Application of the weighted tape requires no tools and only a minimum level of physical strength and dexterity. Through the combination of a malleable/moldable tape and a securing strap, the weighted tape of the present

invention can be used during vigorous workouts without the risk that the weighted tape will come unattached or change positions during use.

In a first embodiment, an athlete can use the weighted training tape in conjunction with an ice skate. The malleable/moldable tape can be wrapped tightly around the skate boot while
5 the securing strap securably retains the tape in position.

In an alternative embodiment, an athlete can apply the weighted tape to the shaft of a sporting device, such as a hockey stick. By practicing with the increased weight on the stick, the player can build strength and endurance in their wrists, arms and shoulders. The malleable/moldable tape can be wrapped tightly around the hockey stick shaft while the securing
10 strap securably retains the tape in position.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of an embodiment of a weighted training tape.

Fig. 2 is a side view of the weighted training tape of Fig. 1.

15 Fig. 3 is a section view of the weighted training tape taken along line A-A in Fig. 2.

Fig. 4 is a perspective view of the weighted tape of Fig. 1 positioned for attachment to an ice skate.

Fig. 5 is a side view of the weighted training tape of Fig. 1 positioned for attachment to an ice skate.

20 Fig. 6 is a perspective view of the weighted training tape of Fig. 1 wrapped about the ice skate.

Fig. 7 is a perspective view of the weighted training tape of Fig. 1 secured about the ice skate.

Fig. 8 is a perspective view of an embodiment of a weighted training tape.

Fig. 9 is a side view of the weighted training tape of Fig. 8.

5 Fig. 10 is a perspective view of the weighted training tape of Fig. 8 being secured about a hockey stick.

Fig. 11 is a side view of the hockey stick including the weighted training tape of Fig. 8.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

10 As depicted in Figs. 1 and 2, a first embodiment of a weighted training tape 100 of the present invention comprises a tape portion 102, a strap portion 104 and a buckle portion 106. Tape portion 102 has a generally flat and elongated shape defined by a first end 102 and a second end 104. Tape portion 102 is further defined by a first end 108, a second end 110, a top surface 112, a bottom surface 114 and a pair of side surfaces 116a, 116b. Tape portion 102 has a tape
15 length 117 defined by the first end 108 and second end 110. Tape length 117 is preferably within the range of 2.0 inches to 20.0 inches. Strap portion 104 is attached to the tape portion 102 proximate the first end 108 using a first fastener 118 while the buckle portion 106 is attached to the tape portion 102 proximate the second end 110 with a second fastener 120. First fastener 118 and second fastener 120 can comprise any suitable fastener, for example, a rivet.

20 As shown in Fig. 3, tape portion 102 has a generally rectangular cross-section 122 with rounded corners 124 at the transition between the top surface 112, bottom surface 114 and side surfaces 116a, 116b. Tape portion 102 comprises a malleable core member 126 surrounded by a

cover member 128. Malleable core member 126 is similarly shaped to the tape portion 102. Malleable core member 126 preferably comprises a dense, hand-malleable, impact resistant material. In the preferred embodiment, core member 126 is made of lead. However, any material having a relatively high density while remaining hand-malleable under ambient
5 temperatures could be used in place of lead. Cover member 128 functions as a protective coating surrounding core member 126. Typically, cover member 128 consists of a rubberized or plasticized coating. In a preferred embodiment, the rubberized or plasticized coating 128 is selected to promote an adherence or gripping quality to the exterior of the cover member 128. This adherence or gripping quality could include a quality of stickiness or other characteristic for
10 increasing friction and adherence. In addition, cover member 128 is anticipated to be available in a plurality of different colors so as to allow users to select a favorite color or one that corresponds with their team colors.

Cover member 128 also serves a cushioning function to allow safe use of weighted training tape 100. Most typically, cover member 128 is applied over core member 126 by
15 dipping core member 126 into a liquefied bath of the coating material. The core member 126 is removed from the bath and allowed to cool whereby cover member 128 permanently resides over core member 126. Cover member 128 is preferably applied so as to have a generally uniform thickness about the core member 126.

The combination of the core member 126 and the cover member 128 cooperatively define
20 a tape width 130 and a tape thickness 132. Generally, it is advantageous to maintain tape thickness 132 as low as possible. In a preferred embodiment, thickness 132 is approximately 0.067 inches. However, thickness 114 could range from .067 inches to a maximum of 0.5

inches. Most preferably, tape width 130 is approximately 1.0 - 2.0 inches. However, it is envisioned that tape width 130 could range from 0.5 inches to 4.0 inches. Preferably, a ratio of tape width 130 to tape thickness 132 of at least 2:1 should be maintained.

Strap portion 104 comprises a length of strap material 134 defined by an insertion end 136, an attachment end 138, an exterior surface 140 and a fastening surface 142. As depicted, fastening surface 142 includes a securing means 144. In a preferred embodiment, securing means 144 can comprise hook and loop tape, i.e. Velcro[®], or suitable alternatives such as snaps, buttons, suitable latches or ties.

Buckle portion 106 comprises an attachment strap 146 and a buckle 148. Buckle 148 includes a buckle opening 150 for attaching to the attachment strap 146.

Generally, the weighted training tape 100 is constructed to have an overall weight of between 2 – 16 ounces. This weight range allows the weighted training tape 100 to be used successfully with all ages of players ranging from children at the beginners level to adults at more competitive, advanced levels. Typically, the overall weight of the weighted training tape 100 is varied by altering the dimensional characteristics of the tape portion 102, i.e., varying the tape length 117, the tape width 130 and the tape thickness 132. The overall weight can also be varied by using alternative materials of construction for the core member 126 such that the material density is altered.

Figs. 4, 5, 6 and 7 depict weighted training tape 100 in use with a skate 152. In a preferred embodiment, skate 152 is a hockey skate although the present invention is equally applicable for use with figure skates, in-line skates or roller skates. As depicted, skate 152 comprises a boot portion 154 and a blade portion 156. Boot portion 154 includes an ankle region

158 to provide ankle support during skating. Blade portion 156 comprises a blade holder 160 and a blade 162. Blade holder 160 is coupled to the bottom of the boot portion 154 such that an opening 164 is defined. To use weighted training tape 100, the user directs places the weighted training tape 100 through the opening 164 as shown in Fig. 4 such that the tape portion 102 is approximately centered on the boot portion 154 with the bottom surface 114 facing the boot portion 154. Next, the user directs the first end 108 and the second end 110 upwards so that the tape portion 102 is tightly formed about the boot portion 154 as shown in Fig. 6. Depending on the tape length 117, first end 108 and second end 110 may be overlapped and criss-crossed. Next, the strap portion 104 is wrapped around the back of the ankle region 158. Insertion end 136 is inserted through buckle opening 150 such that the strap portion 104 can be pulled tightly back around the ankle region 158. When strap portion 104 has been pulled tight, strap portion 104 is secured in place using securing means 144 as shown in Figs. 5 and 7. In the case of securing means 144 comprising hook and loop tape, the hook and loop tape on the fastening surface 142 is pressed together such that the overlapped strap portion 104 is securely retained in position. Once strap portion 104 is secured, a user can skate with weighted training tape 100 without concern that the training tape 100 will fall off or move during use. The player places first end 102 in proximity to front extension 154 and wraps tape 100 around front extension 154 while conforming tape 100 to the shape of the front extension 154.

An alternative embodiment of a weighted training tape 200 is depicted in Figs. 8 and 9. Weighted training tape 200 comprises a tape portion 202, a first strap portion 204 and a second strap portion 206. Tape portion 202 is substantially similar to and resembles tape portion 102 including a generally flat and elongated shape defined by a first end 208, a second end 210, a top

surface 212, a bottom surface 214 and a pair of side surfaces 216a, 216b. Tape portion 202 has a tape length 217 defined by the first end 208 and the second end 210, a tape thickness 219 defined by the top surface 212 and bottom surface 214 and a tape width 221 defined by the pair of side surfaces 216a, 216b. Both first strap portion 204 and second strap portion 206 are attached to the tape portion 202 with a fastener 220. Fastener 220 can comprise any suitable fastener, for example a rivet. Tape portion 202 comprises the same method and materials of construction as previously described and depicted in Fig. 3 for tape portion 102.

First strap portion 204 and second strap portion 206 each comprise a length of strap material 222. Strap material 222 includes a top securing means 224 and a bottom securing means 226. Top securing means 224 and bottom securing means can comprise Velcro[®], snaps, latches or other suitable and cooperative fasteners. First strap portion 204 has a first strap length 228 and second strap portion 206 has a second strap length 229. In a preferred embodiment, first strap length 228 and second strap length 229 are equal in length.

Generally, the weighted training tape 200 is constructed to have an overall weight of between 2–8 ounces. This weight range allows the weighted training tape 200 to be used successfully with all ages of players ranging from children at the beginners level to adults at more competitive, advanced levels. Typically, the overall weight of the weighted training tape 200 is varied by altering the dimensional characteristics of the tape portion 202, i.e., varying the tape length 217, the tape width 221 and the tape thickness 219. The overall weight can also be varied by using alternative materials of construction for the core member 126 such that the material density is altered.

Figs. 10 and 11 depict weighted training tape 200 in actual use with a hockey stick 230. Hockey stick 230 is comprised of a shaft 232 and a blade 234. It is anticipated that stick 230 can be comprised of wood, plastic composites, graphite, fiberglass, aluminum or any combination of such materials. It is also anticipated that shaft 232 can comprise a plurality of differing cross-sections including rectangular, rectangular with rounded edges, oval, or any other commonly used shape. Generally, shaft 232 and blade 234 are joined in a transition area 236. While the preferred embodiment is depicted and described with respect to a hockey stick, the present invention is equally applicable for use with other athletic devices, for example, a golf club, a tennis racket, a lacrosse stick or a baseball bat.

In general, a player wraps the weighted training tape 200 around the hockey stick 230 in proximity to the transition area 236 as this will reduce any effect on the kickpoint or flex of stick 230. First, the player places first end 208 in proximity to the shaft 232 with the bottom surface 214 facing the shaft 232. The user proceeds to wrap the weighted training tape 200 around the shaft 232, as shown in Fig. 10, such that the tape portion 202 tightly conforms to the shape of the shaft 232. Preferably, weighted training tape 200 is wrapped so that at no point is the tape portion 202 overlapped. By preventing overlap of the tape portion 202 and conforming the tape portion 202 to the shape of the shaft 232, the overall tape/stick cross-section is minimized reducing any potential interference with other players during play or practice. The malleability of core member 126 and the gripping qualities of cover member 128 allow weighted training tape 200 to promote attachment without requiring any overlapping of the tape portion 202.

Once tape portion 202 is securely wrapped about the shaft 232, the first strap portion 204 is tightly wrapped and overlapped about the shaft 232 such that the top securing means 224 and

the bottom securing means 226 are engaged. Next, the second strap portion 206 is tightly wrapped and overlapped about the shaft 232 such that the top securing means 224 and the bottom securing means 226 are engaged. When tightly wrapped and fastened, the first strap portion 204 and the second strap portion 206, in conjunction with the wrapped tape portion 202, retain and
5 hold the weighted training tape 200 in a fixed position relative to the shaft 232 such that the weighted training tape 200 does not become dislodged or loose leading to potential injury or limiting its training effectiveness. It will be obvious to one skilled in the art that tape 200 can be similarly wrapped at any other suitable location on the hockey stick 230, for example on the blade 234. In addition, tape 200 can be wrapped over the top of a layer of friction or non-skid
10 tape to further limit movement of tape 200 relative to the shaft 232 during use.

While the aforementioned embodiments have been described with reference to the sports of hockey and figure skating, it will be obvious to one skilled in the art that the weighted tapes of the present invention can be similarly applied in other sports requiring unobtrusiveness and versatility of application. Examples of suitable applications include tennis, golf, lacrosse, bandy,
15 field hockey and baseball. In addition, weighted training tapes of the present invention can also be used with almost any skate configuration so as to allow use with inline skates and roller skates. These examples are for illustrative purposes only and are not intended to limit the scope of the present invention.